AMENDMENTS TO THE SPECIFICATION

In the Specification:

Please replace paragraph [0042] of the Published Application with the following rewritten paragraph:

FIG. 1 is a block diagram illustrating an existing splitterless ADSL system 101. The subscriber premises is connected to a central office 109 (CO) by a twisted wire pair ~~107~~ telephone cable 107. At subscriber premises 103, the twisted wire pair 107 is connected to a fax machine 121, to a telephone set 123, and to a remote ATU-R 105 (ADSL Transceiver Unit), using for this purpose internal telephone lines 117. ATU-R unit 105 is connected directly to a telephone line 117 and to a PC 125 (personal computer) by an Ethernet cable 124. The fax machine 121 and telephone set~~,~~ 123 are connected to telephone line 117 by microfilter ~~219~~119. Central office 109 includes an ATU-C 111 (CO ADSL Transceiver Unit), a POTS-splitter 131, a POTS Line Card 108, a data switch 135, a telephone switch 137, a data network 115, and a telephone network 113.

Please replace paragraph [0064] of the Published Application with the following rewritten paragraph:

In step 265, modulation parameters are calculated by a constellation encoder and a gain scaler for each data carrier. In step ~~163~~ 267 the modulation parameters of all carriers are transformed by IDFT (Inverse Discreet Fourier Transformation) processing to produce digital samples of the DMT (Discrete MultiTone) signal. In step ~~165~~ 269 the digital samples are written into an output buffer. In step ~~167~~ 272 a DTA (Digital To Analog) converter transforms the digital samples to an analog DMT line signal

Please replace paragraph [0068] of the Published Application with the following rewritten paragraph:

In step 259, tone ordering is calculated for the PCM word stream, and each 64 kb/sec PCM stream is distributed between two VC's or DMT signal. In step 260 parity bytes are calculated by an RS encoder for PCM words of all the voice channels, which are then loaded on an additional "voice carrier". In step 261 each 8-bit PCM word is transformed into one 8-bit QAM symbol by a VCs constellation encoder and gain-scaler. A fixed 8-bit loading on each "voice carrier" is consequently provided. In step ~~278~~ 355 the sampling of the PCM encoder is synchronized with the frames of the DMT line signal.

Please replace paragraph [0070] of the Published Application with the following rewritten paragraph:

To illustrate the way in which the allocation of data carriers is interactively changed, reference is now made to the embodiment of the invention shown in FIG. 10B which illustrates the voice processing block layout in a dynamic VCs allocating procedure. A carrier allocator 301 receives allocation instructions from a processor 303. This processor conducts periodic analyses of the voice signals at voice interface port 253A. Upon the identification of a silent voice channel, it instructs carrier allocator 301 to reassign the respective VCs to data communication, in addition to those assigned to data exclusively. Interface ports 253A and the others, amplify and filter the corresponding voice signals respectively. PCM encoders such as 257A sample the voice signal coming from the corresponding voice interface port at a sampling rate of ~~the~~ 8kHz, transforming the analog voice signal into a ~~65~~64-kbit/sec sequence of 8-bit PCM words. Each PCM encoder uses standard A-Law or μ-Law coding, the same used in PCM telephone systems ANSI TI or E1. The PCM words of active voice channels pass then to carrier allocator 310 and then to VCs tone-ordering block 259 that distributes each 64 kbit/sec PCM word stream of busy telephone channels between two VCs of DMT signal. Carrier allocator 301 passes on to the "voice carriers" tone ordering block 259 only those PCM signals originating from such PCM encoders that are connected to active voice interface ports. Inactive PCM coders that are not currently in use by telephone lines are not connected to "voice carriers" tone ordering block 259.

Please replace paragraph [0075] of the Preliminary Amendment filed February 11 03 with the following rewritten paragraph:

Data is processed in the same way as in the first example. Fig. 12 illustrates schematically the incorporation of a T1 format data stream containing several digital telephone channels into the ADSL system. First, the data stream 271 coming from a frame relay in T1 format is split into several channels by a T1 interface 277. Each such channel carries a sequence of 8 bit PCM words at a bit rate of 64 kb/s of a respective telephone channel. In the next step, each PCM stream 279 A, B,... is modulated by VCs DMT modulator 259~~,~~ that distributes each 64 kb/sec PCM stream between two VCs of DMT signal. In the next step, a VCs QAM modulator and gain-scaler 261 transforms each 8-bit PCM word into one 8-bit QAM symbol and provides a fixed 8-bit loading on each one of the VCs. A synchronization block 255 synchronizes ~~the~~ T1 system clock 273 with the frames of the DMT line signal.